not seek to maximize open access for small businesses that account for the majority of the country's economic activity and that are in need of modernization. Small business, as the Department is well aware, account for 70 percent of new jobs every year as well the vast majority of technological innovation.

Thus, it would seem consistent with the Administration's goals of open access and jobs creation that a comparable amount of funding would be available for pilot projects designed to assist small and minority-owned businesses that are outside of the narrow technologically-advanced community.

IV. ADVANCED UNIVERSAL SERVICE SHOULD BE DEFINED BY LOCAL JURISDICTIONS UNDER A NATIONAL POLICY FRAMEWORK.

According to the NOI, witnesses at NTIA's field hearings voiced "strong public support for expanding the existing definition of universal service." NOI para. 27. Some witnesses recommended that regulators make a service universally available, if a predetermined minimum number of U.S. households become subscribers (the marketplace approach). A second approach enables subscribers to access <u>any</u> offered service via a network connection (the network connection approach). NOI paras. 20 & 30.

While both approaches have merit, OC\UCC submits that both ideas should be integrated into a regulatory framework that allows local authorities to shape the direction of advanced universal service in order to address the diverse needs of communities across the country. Federal policy should take into consideration that what might be valid for rural Alaskans might be inappropriate for a city with a dense urban population. Remote villages in Alaska might have a need to tie together

local governing councils with regional and state level government in order to better coordinate policy decision-making. An urban community might have stronger need for a universally available service that lists housing for low and moderate income families.

While many communities share the need for comparable services (e.g., distance learning, telemedicine), they may desire to implement them on different time-frames. Secondly, a service might need to be tailored to meet local needs. For example, many communities share the need for distance learning, however, a wealthy metropolitan suburb that has a high penetration of home-based PCs may decide to achieve this objective by making the Internet part of universal basic service. A disadvantaged community, on the other hand, with less PC penetration may place a higher priority on subsidizing the cost of home-based PCs (see Section V, infra).

In short, state authorities should have the ability to determine what kinds of advanced communication services are essential to the public necessity and convenience of its citizens. This can be achieved by means of a federal regulatory framework that promotes openness and competition:

a) state authorities can only designate advanced universal services in generic terms (e.g., the ability to remotely access public and private library catalogues). All competitors should be allowed to apply for authorization to provide the generic service using unique features and designs;

b) any service that is part of universal service must provide a version that is accessible by disabled people and people with low-cost terminals;

c) open network architecture safeguards should apply such that local telephone company and its competitors will pay the same tariff and have comparably equal access to network facilities;

d) services must be deployed in a manner that does not discriminate on the basis of race, income or rural location of subscribers;

e) a service must be deemed to be essential to the public necessity and convenience in order to receive a subsidy from a universal service fund. Strictly commercial services (e.g., sales promotions) should be prohibited from receiving a subsidy.

Both the "marketplace approach" and the "network approach" can be integrated into a regulatory scheme that affords local communities some measure of control over defining advanced universal service according to local needs and priorities. The above described scheme provides state regulators the flexibility of relying upon the marketplace to register a certain level of demand before authorizing the service to be part of universal service. Competitors in such a scenario would initially enter the market as unregulated service providers. If the service achieves an predetermined level of market penetration, the state PUC has the option of authorizing the service, in generic terms, to be offered as part of universal service. At that point, any competitor should be permitted to offer their version of the generic service provided they comply with universal service guidelines (items b through e, above).

V. THE CONCEPT OF ADVANCED UNIVERSE MUST EXTEND TO CUSTOMER PREMISE EQUIPMENT.

Noting that expensive customer premise equipment could present a barrier to access, the NOI states that,

> Without adequate equipment on the customer's premises, network connection and the many services it affords is meaningless.

NOI para. 33.

Certainly if the NII is to promote equality of access, as opposed to exacerbating present social economic discrepancies, it is imperative that the concept of universal service extend to CPE. At minimum CPE

subsidized by a universal service fund should afford two-way interactive access and offer features that are user-friendly for disabled users.

The NOI submits for comment the idea of a voucher system that would allow consumers to select CPE of their choice without government intervention. This approach is appropriate for public institutions (libraries and community access centers) and merits further discussion.

However, with respect to individual consumers OC\UCC proposes the adoption of a user-subsidy that would take the form of billing credits that appears on the statement of one or several information service providers. This approach ensures that the subsidy is used to connect to the network.

In order to help prevent consumers incurring unreasonable up-front costs, information service providers should be encouraged to offer subsidized CPE in conjunction with their service. In this manner eligible consumers could receive an immediate discount on the cost of equipment instead of having to recover an initial outlay over the duration of the subsidy.

The same eligibility requirements that presently apply to LinkUp America programs should apply to CPE subsidies. One of the advantages of a user-subsidy for low-income subscribers is that the price of CPE will decline as market penetration increases, thus benefiting non-subsidized subscribers.

The subsidy should be funded by all information service competitors in a given service area. Information service providers will ultimately benefit from the increased usage and on-line market penetration that will result for the subsidy.

Even if the amount of the subsidy fund is insufficient to facilitate the purchase of high-end equipment by large numbers of eligible users, it will expose low-income consumers to low-cost terminals and presumably increase their technological literacy. This initial exposure should serve to familiarize people with the technology that is available and encourage them to migrate to more sophisticated terminals.

In conjunction with a voucher system designed to enable public institutions to acquire high-end equipment, a user-subsidy can work to ensure reasonable access to the Information Superhighway. If schools, libraries, and community access centers with high-end equipment are spread though out the community low-income consumers will be able to chose between alternative means of accessing the highway - from their home or a community-based institution. Working together, a user-subsidy for individuals and a voucher system for public institutions can serve to close the gap between the quality of access afforded low-income and affluent households.

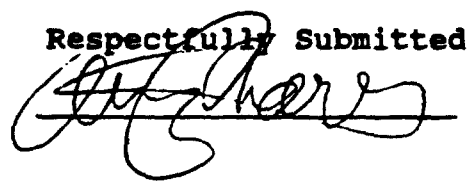
Consumer education is also an important component of any successful user subsidy program. Users must be informed about the benefits of on-line services, how to qualify for the subsidy, the kind of information that is available on-line, and how to design and operate bulletin boards and databases. Government can play an important role in funding demonstration projects designed to promote the idea of on-line services for the general public.

VI. CONCLUSION.

For the above reasons OC\UCC urges NTIA to support polies favoring

effective anti-redlining legistlation, open access for small and minority-owned businesses, locally defined universal access and the subsidization of CPE.

Respectfully Submitted,



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December 14, 1994

EXHIBITS

I. TAF CLASSIFICATION BY RBOC REGION

II. TAF PROFILES

III. TEST MARKETING DEMOGRAPHIC ANALYSIS

IV. VDT DEMOGRAPHIC ANALYSIS

V. PROPOSED ANTI-REDLINING LEGISLATION

I. TAF CLASSIFICATION BY RBOC REGION

Exhibit 1-5
TAF Classification by RBOC Region

Source: the Yankee Group, October 1989

	TAF %	Near-TAF %	Non-TAF %
Total	15.7	28.7	55.6
Ameritech	13.3	28.1	58.6
Bell Atlantic	19.0	28.7	52.2
BellSouth	11.6	32.4	56.0
NYNEX	19.6	24.9	55.6
Pacific Telesis	21.3	30.7	48.0
Southwestern Bell	16.1	24.2	59.6
U S West	12.8	29.6	57.5

II. TAF PROFILES

Exhibit 2-11
Comparison of Households by TAF Segmentation

Source: the Yankee Group, October 1989

	Total	TAF	Near-TAF	Non-TAF
Respondent mean age	46.5	41.9	43.3	49.6
Retired	19.9%	7.9%	10.9%	28.0%
Married	60.2%	68.3%	65.8%	54.9%
Mean # people in household	2.6	3.2	2.8	2.3
Mean # children in household	0.7	1.0	0.8	0.5
4-year college or more	27.2%	39.2%	27.6%	22.9%
Mean annual income	$36,100	$58,800	$38,500	$28,400
Home owners	73.2%	80.8%	74.9%	70.1%
Mean home value	$86,000	$118,300	$92,000	$73,200
Mean years at residence	8.9	8.1	8.8	9.2
Home-based business	15.5%	28.8%	18.7%	10.1%
Live in large city	20.8%	25.0%	19.6%	20.2%
Live in rural area	17.0%	12.5%	15.7%	18.9%

Exhibit 2-12
Demographic Comparison by RBOC Region

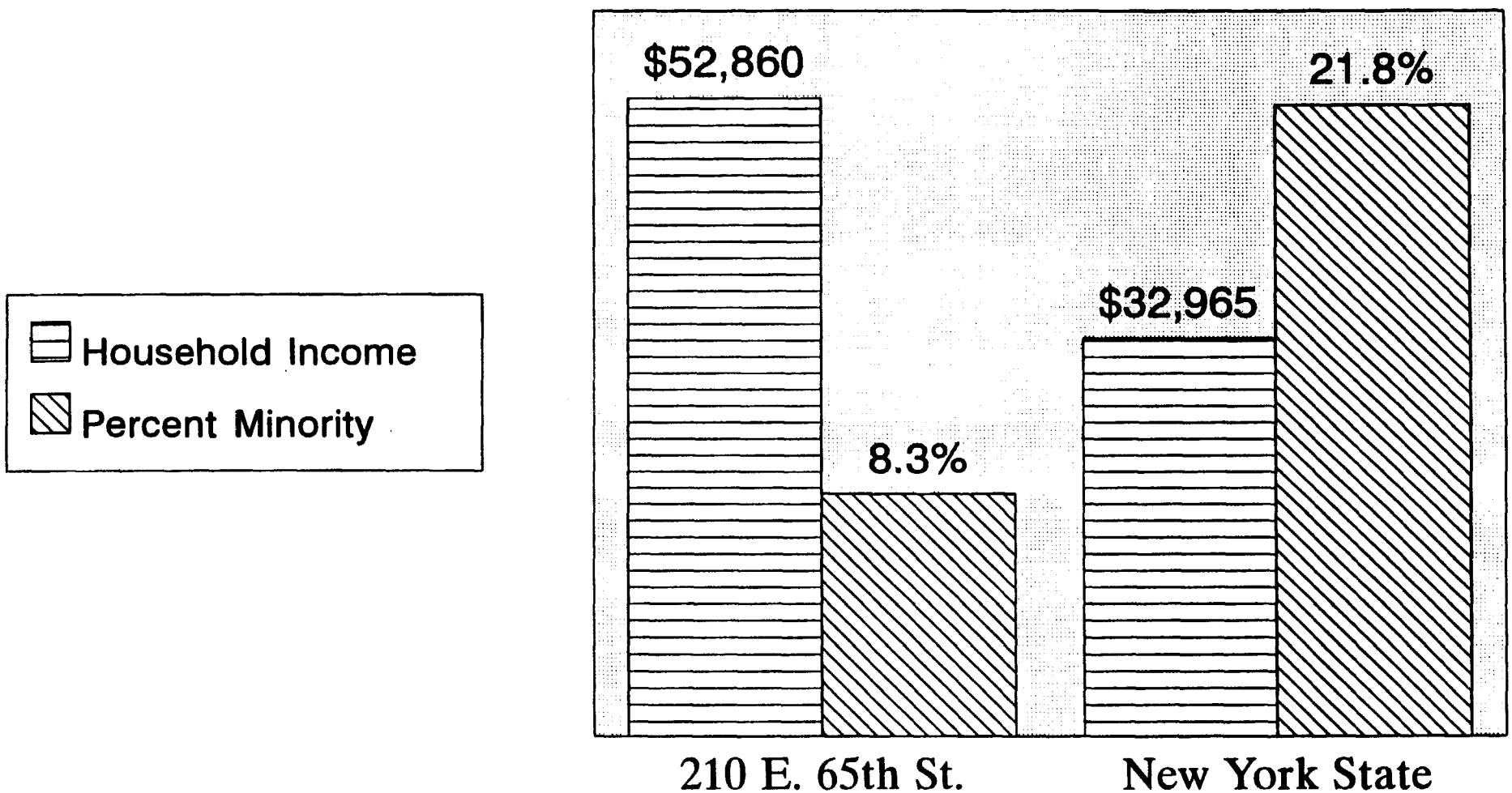
Source: the Yankee Group, October 1989

	Ameritech	Bell Atlantic	Bell-South	NYNEX	Pacific Telesis	SW Bell	U S West
Respondent mean age	46.1	46.2	47.4	47.1	46.9	45.0	46.4
Retired	17.1%	17.4%	23.5%	18.5%	16.7%	23.0%	22.6%
Married	59.7%	57.9%	61.1%	60.3%	57.3%	64.0%	61.1%
Mean # people in household	2.6	2.7	2.6	2.6	2.6	2.5	2.5
Mean # children in household	0.7	0.7	0.6	0.7	0.7	0.7	0.7
4-year college or more	27.2%	39.2%	27.6%	22.9%	39.2%	27.6%	22.9%
Mean annual income	$37,000	$36,400	$31,700	$40,300	$44,900	$37,700	$29,600
Home owners	76.4%	70.9%	79.5%	63.5%	66.0%	81.4%	70.8%
Mean home value	$69,200	$92,800	$68,300	$129,000	$140,500	$64,300	$68,700
Mean years at residence	8.6	8.9	9.8	9.4	8.1	9.1	8.2
Home-based business	13.3%	13.8%	13.3%	16.9%	20.0%	17.4%	17.3%
Live in large city	20.5%	17.4%	15.4%	25.4%	32.7%	21.1%	19.9%
Live in rural area	17.1%	18.2%	22.9%	11.1%	9.3%	14.3%	19.9%

III. TEST MARKETING DEMOGRAPHIC ANALYSIS

-NYNEX-

VDT TRIAL vs STATE DEMOGRAPHICS



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-NYNEX-

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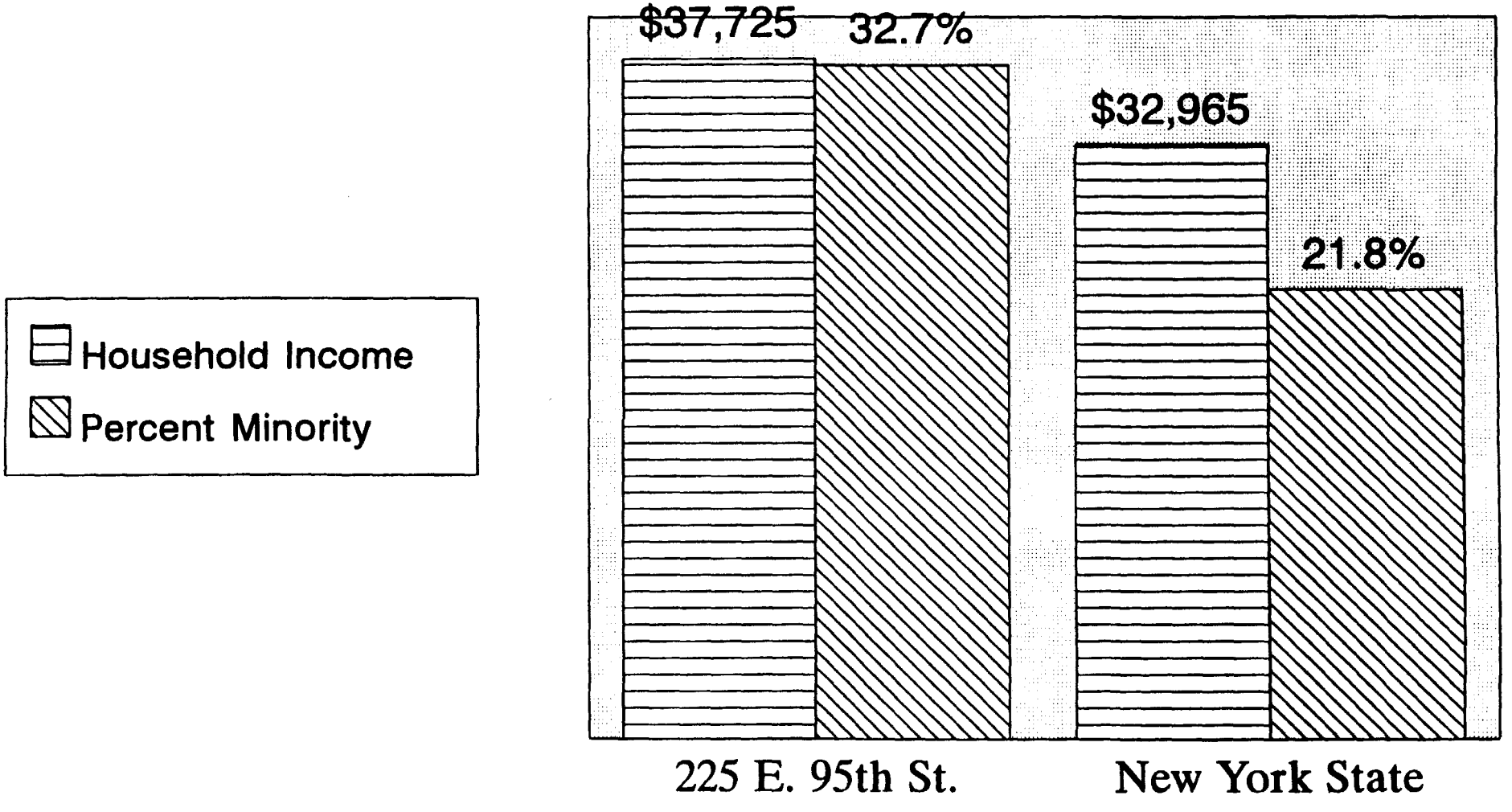

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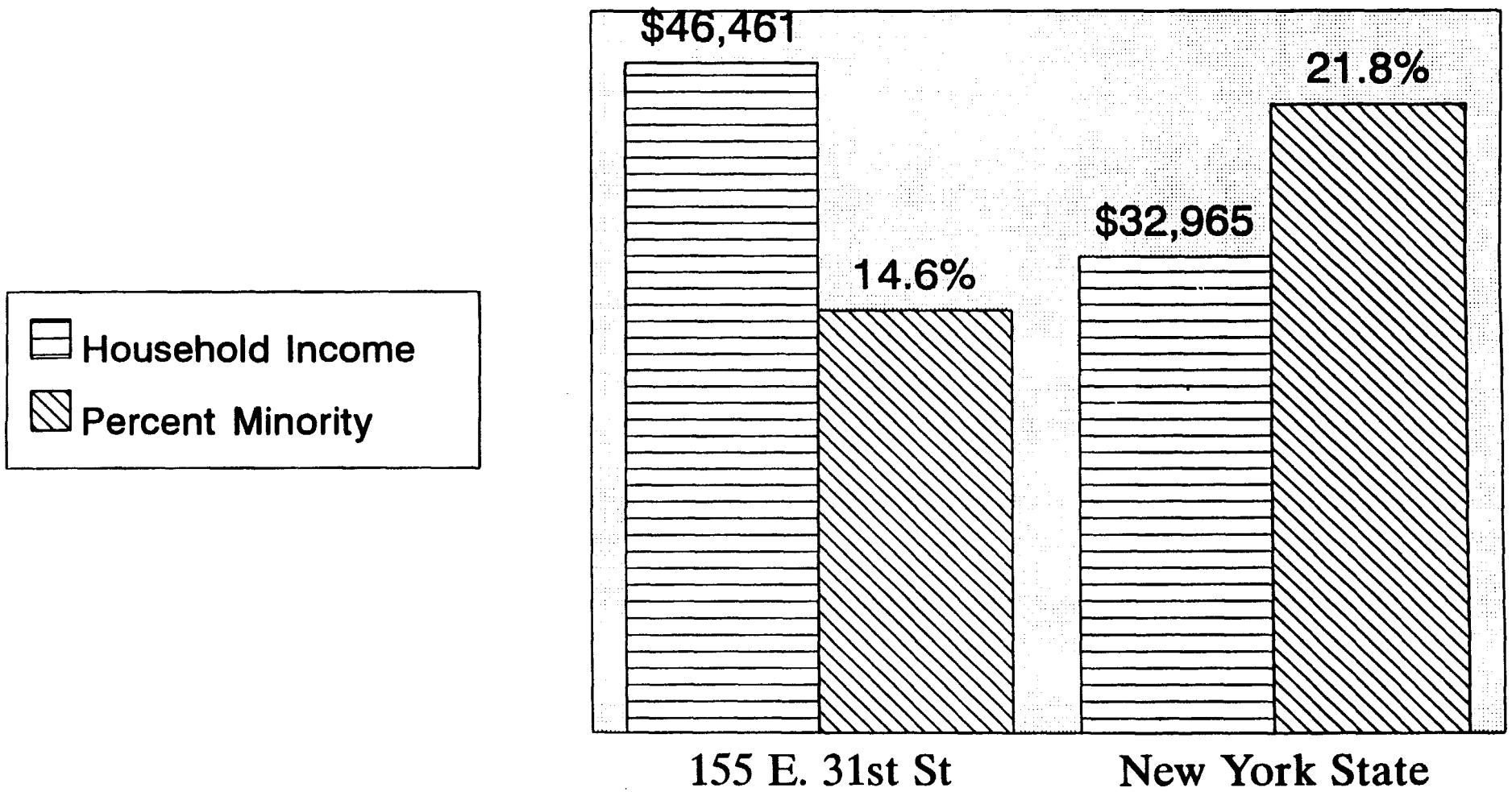

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-BELL ATLANTIC-

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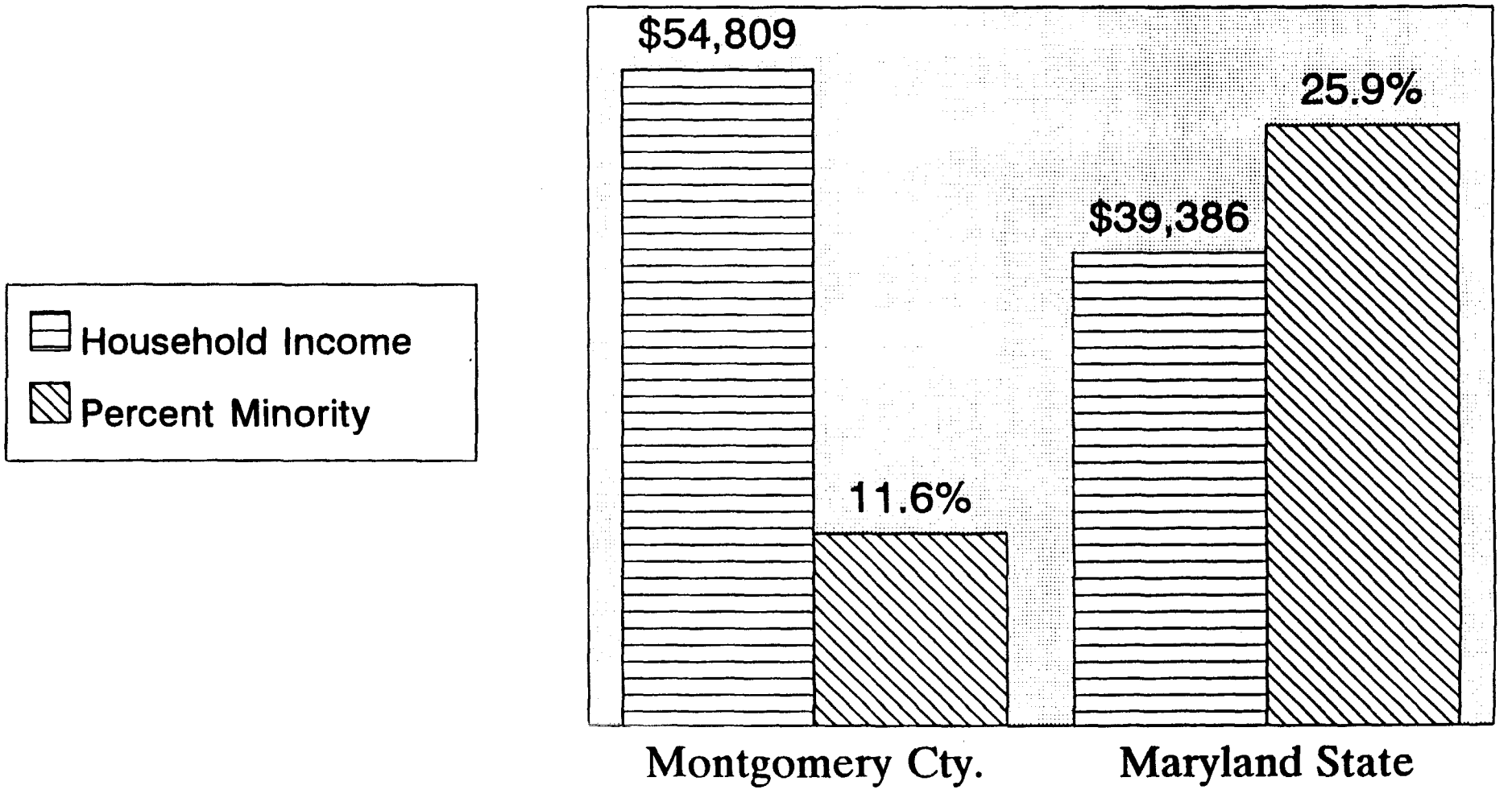
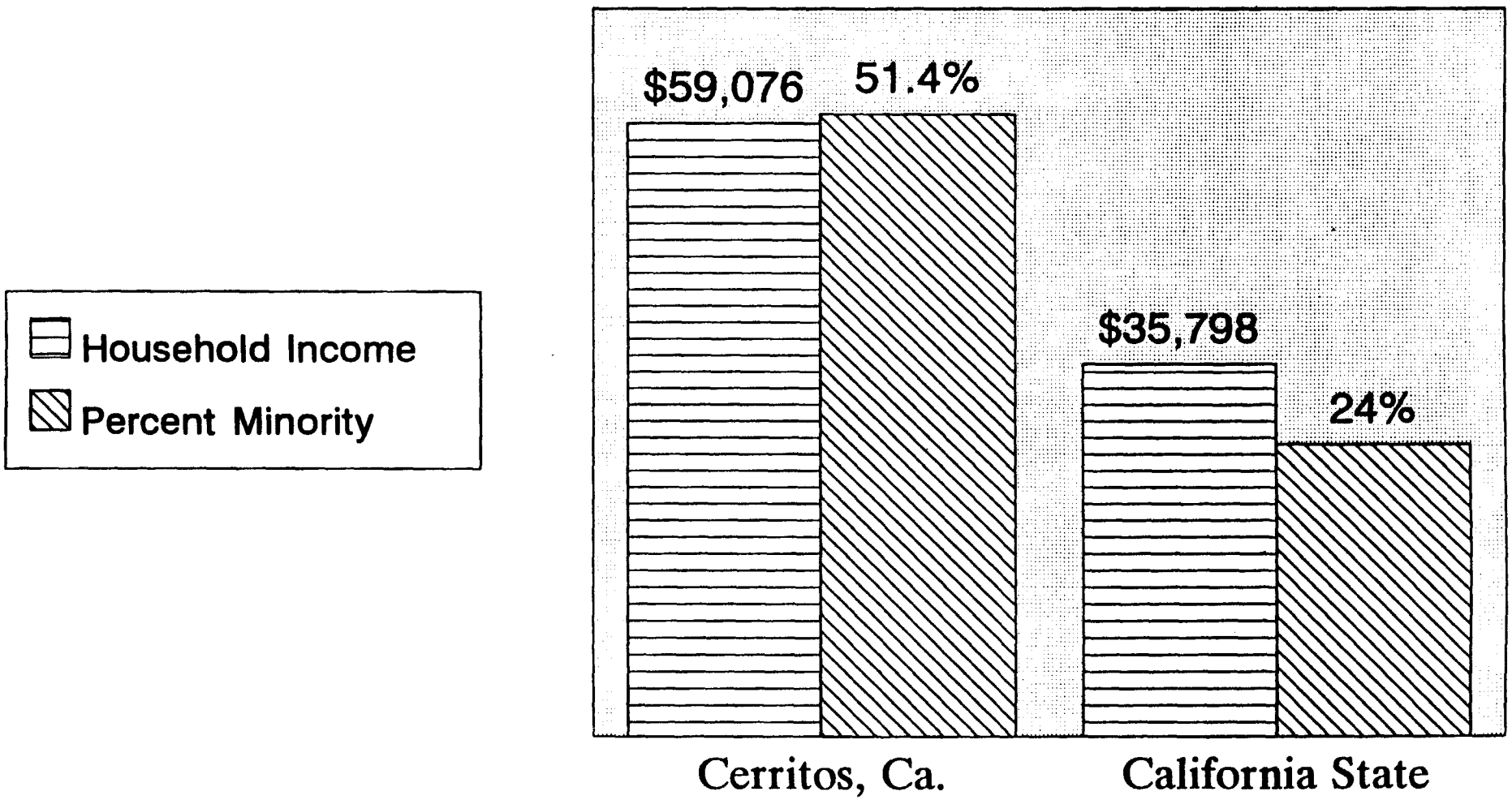


DATA: U.S. Census Bureau

-GTE

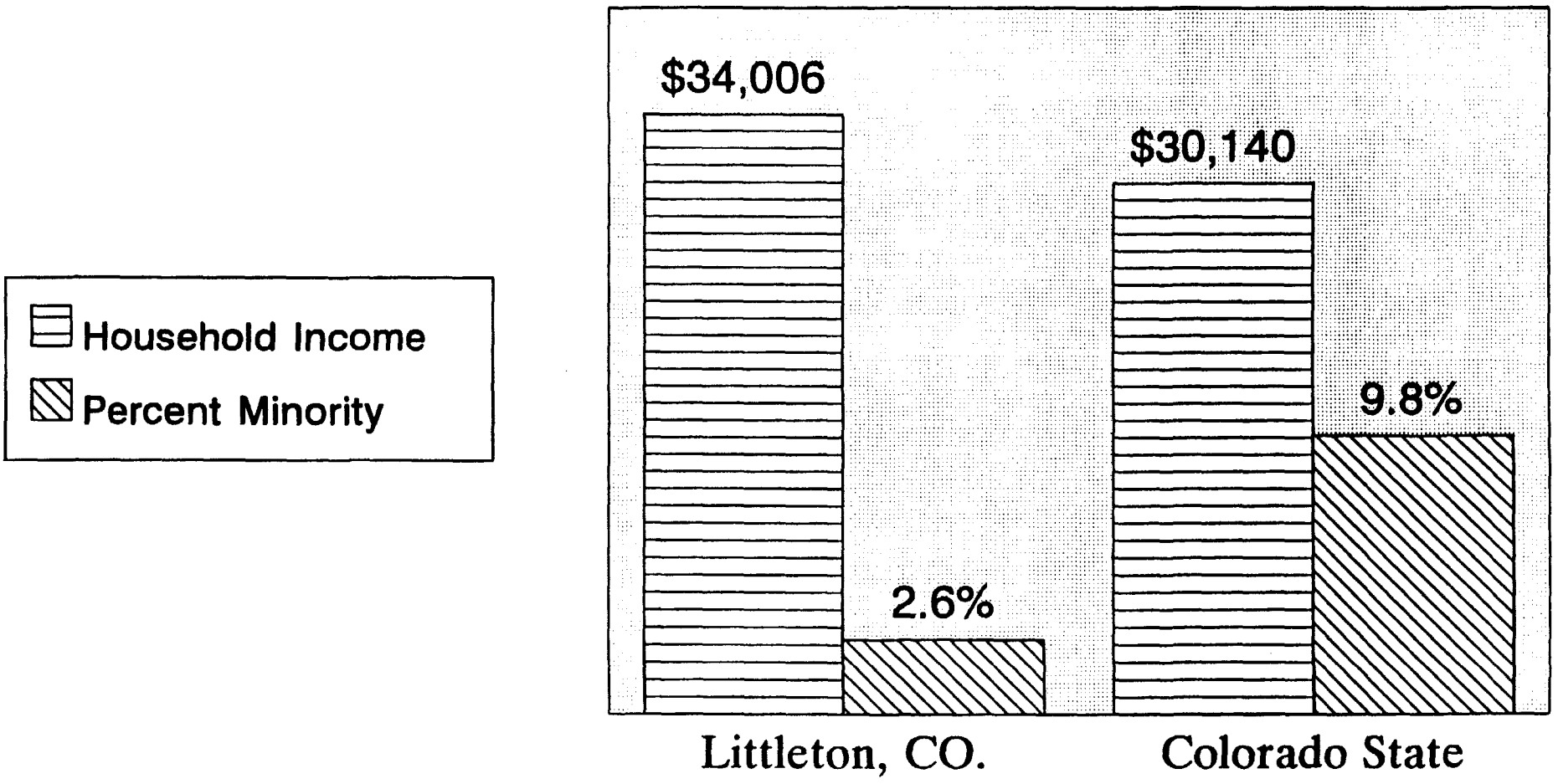
VDT TRIAL vs STATE DEMOGRAPHICS



DATA: U.S. Census Bureau

-US WEST-

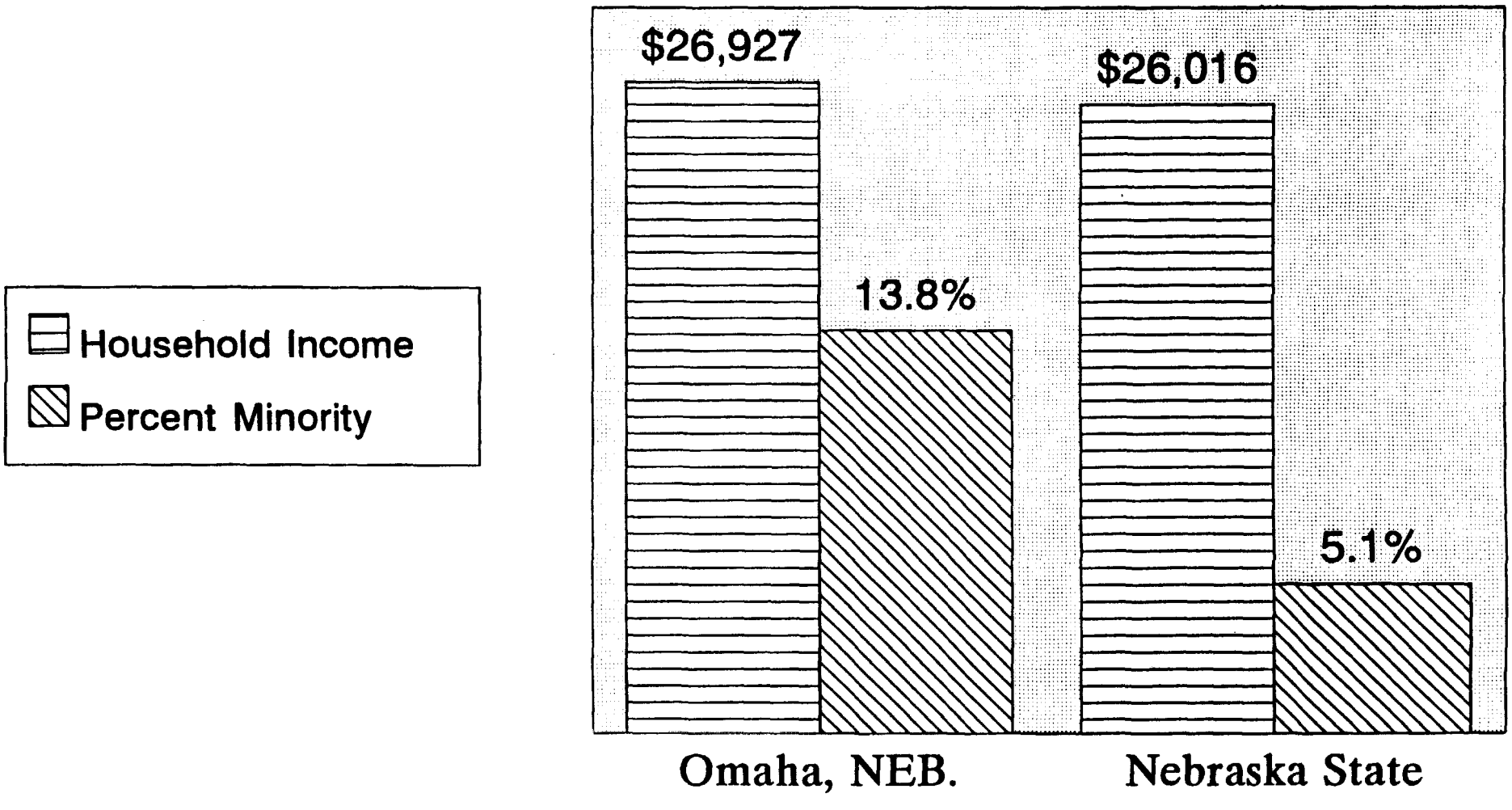
VDT* TRIAL vs STATE DEMOGRAPHICS



DATA: U.S. Census Bureau
*Viewer Control Trial

-US WEST-

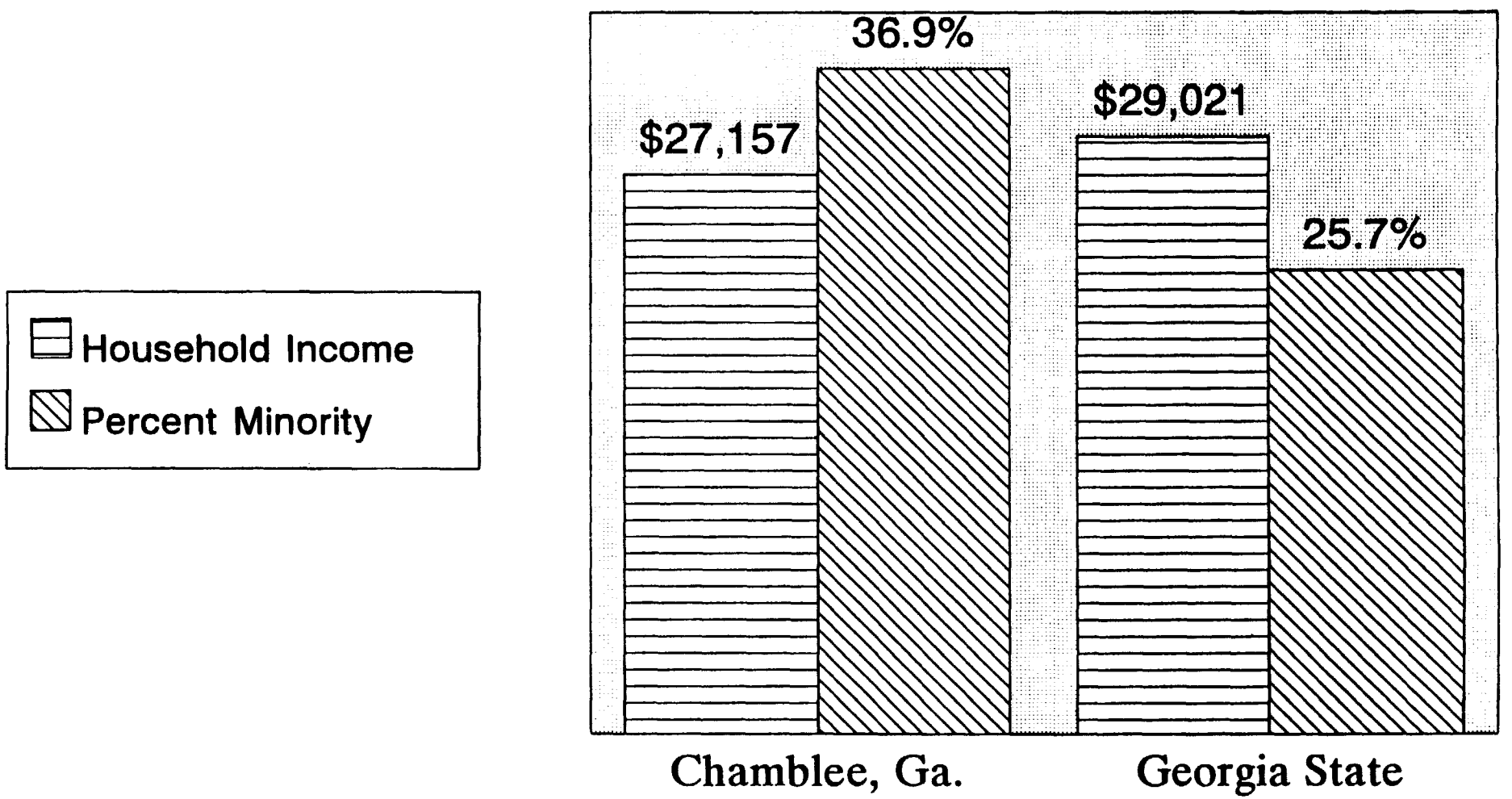
VDT TRIAL vs STATE DEMOGRAPHICS



DATA: U.S. Census Bureau

-BELLSOUTH-

VDT TRIAL vs STATE DEMOGRAPHICS



DATA: U.S. Census Bureau

IV. VDT DEMOGRAPHIC ANALYSIS

STATE OF MARYLAND)
) SS
COUNTY OF MONTGOMERY)

AFFIDAVIT OF DR. MARK N. COOPER

IN SUPPORT OF THE PETITION FOR RELIEF
OF THE
CENTER FOR MEDIA EDUCATION,
THE CONSUMER FEDERATION OF AMERICA,
THE UNITED CHURCH OF CHRIST
THE NATIONAL ASSOCIATION FOR THE ADVANCEMENT OF COLORED PEOPLE
NATIONAL COUNCIL OF LA RAZA

I, Dr. Mark N. Cooper, first being duly sworn, hereby state that the following information is true and correct to the best of my knowledge, information and belief:

I. BACKGROUND

1. I am President of Citizens Research, 504 Highgate Terrace, Silver Spring, Maryland 20904. I am also Director of Research of the Consumer Federation of America.

2. I hold a Ph. D. in Sociology from Yale University, an M. A. in Sociology from the University of Maryland, and a B.A. in English from the City College of New York.

3. Prior to founding Citizens Research, a consulting firm specializing in economic, regulatory and policy analysis, I spent four years as Director of Research at the Consumer Energy Council of America. Prior to that I was an Assistant Professor at Northeastern University teaching courses in Business and Society in both the College of Arts and Sciences and the School of Business. I have also been a Lecturer at the Washington College of Law of the American University, co-teaching a course in Public Utility Regulation.

4. I have testified on various aspects of telephone ratemaking before the Public Service Commissions of Arkansas, Colorado, Delaware, the District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Manitoba, Maryland, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Virginia and Washington, as well as the Federal Communications Commission, the Canadian

Radio-Telephone Commission and a number of state legislatures.

5. I have also testified on cable TV matters before the Congress and the Federal Communications Commission.

II. PURPOSE AND CONCLUSION

6. On behalf of the Center for Media Education and the Consumer Federation of America I have reviewed a sample of video dialtone applications to ascertain whether these services are being deployed on an equitable basis.

7. My analysis demonstrates a clear pattern in the initial video dialtone offerings of four of the Regional Bell Operating Companies (RBOCs) in which areas that are predominantly lower income and minority have not been provided video dialtone service. For each of the companies in at least two cities, I demonstrate that there has been a failure to serve the lowest income area (counties, if that is the way the video dialtone is defined, exchanges where those are identified by the company or census tracts, where I have identified the units of analysis). These districts also tend to be heavily minority.

III. METHODOLOGY

8. A complete analysis of all applications was not possible because the companies have not provided data in a format that would enable me to do very precise analysis. In many cases the maps provided by the company are crude to say the least. In no case has a telephone company systematically presented census tract data or zip code level detail. Given the very limited nature of the data provided by the companies, I have presented a series of analysis based a variety of forms of data. The diversity of approaches was dictated by the inconsistent quality and level of data made available by the companies. In order to ensure that my conclusions are robust, I have made comparisons in a variety of ways for at least one socio-economic characteristic in at least two cities served by each of the companies which have filed video dialtone proposals to date.

9. DATA SOURCES: I have relied on a variety of forms of data. I have used census data where available by matching the company maps with census tract maps and calculating the difference between served and unserved areas. In one case a computer mapping program was used to compare districts that are wholly served to others that are either partially served or not served at all. In several cases I relied strictly on telephone company provided income data. Finally, in one case I utilized telephone company marketing data.

10. DEFINITIONS: For purposes of this analysis, minority population is defined as black or hispanic. The mean percentage of persons in an area who are black or hispanic was calculated. Mean household income was calculated, except in those cases where telephone companies or consultants provided the income data as medians. In those cases, a median of the medians was calculated.[1]

11. GEOGRAPHIC AREAS: Throughout the analysis an attempt has been made to identify the smallest and most directly relevant areas for comparison. Within any given geographic area this involves

central cities separated from suburbs,

Primary Metropolitan Statistical Areas separated from Consolidated Metropolitan Statistical Areas, and

counties within states.

12. SPECIFIC AREAS: The specific methodologies for each of the areas described in Exhibits 1 and 2 are as follows.

13. For Indianapolis,[2] San Diego[3] and Denver (minority percentages only)[4] characteristics, I compared the maps provided by the company to census tract maps and identified specific census tracts which were proposed to be served. I counted as unserved areas are all others in the Consolidated Metropolitan Statistical Area (CMSA). In all cases the statistics calculated are means for

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[1] For categorical data (census tracts or exchanges) where medians are provided, the best measure of the central tendency is to identify the middle (median) cell in the distribution and interpolate the median value in that cell from the data. I call this the median of the medians.

[2] In the Matter of the Ameritech Operating Companies For Authority pursuant to Section 214 of the Communications Act of 1934, as amended, to construct, operate, own and maintain, a video dialtone system within geographically defined areas in Indiana, WPC 6928.

[3] In the Matter of the Application of Pacific Bell for Authority pursuant to Section 214 of the Communications Act of 1934 and section 63.01 of the Commission's Rules and Regulations, to Construct and Maintain Advanced Telecommunications Facilities to Provide Video Dialtone Service to Selected Communities in San Diego, California, WPC-6916.

[4] In the Matter of the Application of U S West Communications Inc., for Authority Under Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate Own and Maintain Facilities and Equipment to Provide Video Dialtone Service in Portions of the Denver, Colorado, Service Area, WPC-6919.

served and unserved areas.

14. Chicago[5] characteristics are based on the Chicago Primary Metropolitan Statistical Area (PMSA), since the CMSA crosses state lines and no area outside of Illinois but inside the CMSA was served. The median of the medians for income for areas served is compared to the median for the entire Chicago PMSA.[6]

15. Income for Denver, Portland[7] and Minneapolis[8] is the median of the medians for served and unserved areas identified by the company in its opposition.[9]

16. For Washington Metro,[10] Orange County[11] and South Bay[12] I compared the served

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[5] In the Matter of the Ameritech Operating Companies For Authority pursuant to Section 214 of the Communications Act of 1934, as amended, to construct, operate, own and maintain, a video dialtone system within geographically defined areas in Illinois, WPC 6929.

[6] In this case a consultant (Demo Graphics) provided median based on a computerized mapping program.

[7] In the Matter of the Application of U S West Communications Inc., for Authority Under Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate Own and Maintain Facilities and Equipment to Provide Video Dialtone Service in Portions of the Portland Oregon, Service Area, WPC-6921.

[8] In the Matter of the Application of U S West Communications Inc., for Authority Under Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate Own and Maintain Facilities and Equipment to Provide Video Dialtone Service in Portions of the Minneapolis-St. Paul, Minnesota, Service Area, WPC-6922.

[9] In the Matter of the Application of U S West Communications Inc., for Authority Under Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate Own and Maintain Facilities and Equipment to Provide Video Dialtone Service in Portions of the Portland, Oregon, Denver Colorado, and Minneapolis-St. Paul, Minnesota, Service Area, WPC-6919, 6921, 6922; US West Opposition (filed March 17, 1994).

[10] In the Matter of the Application of Chesapeake and Potomac Telephone Companies of Maryland and Virginia, for Authority Pursuant to Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate, Own and Maintain Facilities and Equipment to Provide a Commercial Video Dialtone Service Within a Geographic Territory Defined by the Maryland and Virginia Portions of the Washington Local Access Transport Area, WPC-6912.

[11] In the Matter of the Application of Pacific Bell for Authority pursuant to Section 214 of the Communications Act of 1934 and section 63.01 of the Commission's Rules and Regulations, to Construct and Maintain Advanced Telecommunications Facilities to Provide